Lucent Technologies
Bell Labs Innovations



Cindy Christy

President, Mobility Solutions Group

Live wireless. Work wireless. Be wireless.

Forward Looking Statement Disclosure

This presentation includes some forward-looking statements about our expectations for our future performance. Actual results could differ materially from those suggested by my comments today. Additional information about factors that could affect future results are addressed in our SEC filings, including our Form 10-K, 10-Q, and 8-Ks.

Mobility Overview

Lucent Technologies
Bell Labs Innovations



- **Q204 Highlights:**
  - **Revenues of $951M**
  - **Sequential gains in segment income for each of the last three quarters, to $378M in Q204, up $206M Q/Q**
  - **Selected by Verizon Wireless as a key supplier for its BroadbandAccess high-speed mobile data network**
- **Increased share in the global CDMA market to 41.4% in 2003** (source: Dell'Oro)
- **Gaining momentum in UMTS/W-CDMA**

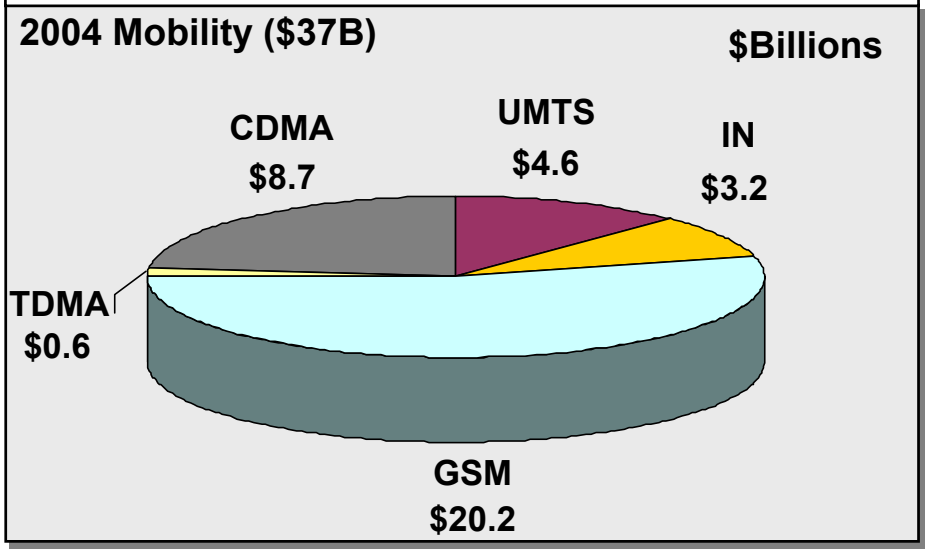
Base Stations	Radio	3G Mobile Switching	Software and Applications	Data Networking Portfolio
✓ Flexent™ OneBTS™ Modcell 4.0 ✓ Flexent® Modular Cell 4.0 Compact ✓ Supports CDMA2000 and UMTS/WCDMA	✓ Radio Network Controller provides high-performance radio access control function for CDMA2000 and UMTS/WCDMA	✓ Softswitch MSC enables innovative new services for mobile Internet and voice-over-packet	✓ Super Distributed HLR authenticate, manages profiles and Internet addresses ✓ MiLife™ Portfolio	✓ Data Networking minimizes data transport leasing costs and simplifies/consolidates network operations

Mobility Market

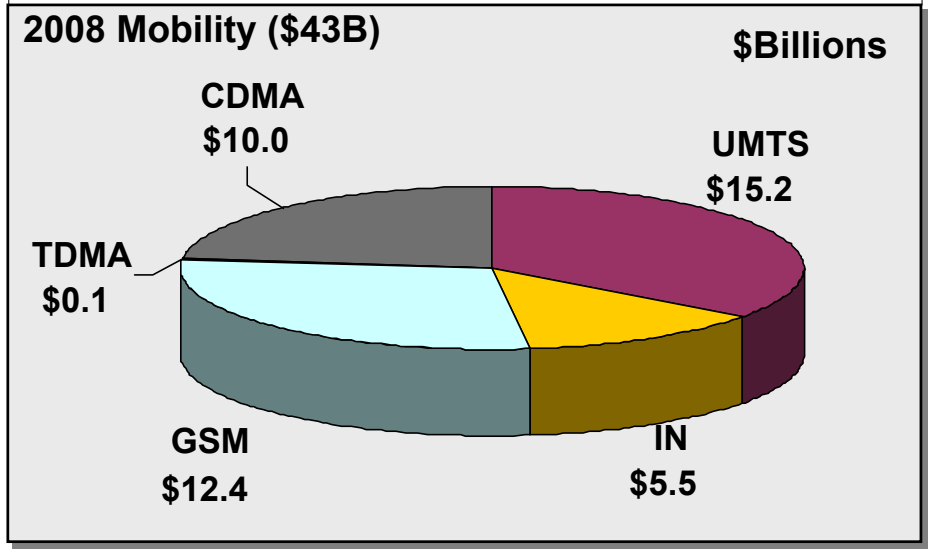
Lucent Technologies
Bell Labs Innovations

- 3G spread-spectrum continued growth worldwide
- Decline in GSM, UMTS delay in Europe
- IN as enabler of new services
- **Lucent's advantage**: Intense focus on 3G spread-spectrum
  - CDMA2000 and WCDMA (UMTS)

Spread spectrum technology made up 44% of TAM in 2004…



…and grows at a rapid pace to 71% of the mobility spend by 2008



Lucent Technologies Mobility Solutions Group

Recent Wireless Wins

Lucent Technologies
Bell Labs Innovations



- ✓ **U.S. Cellular**
  - – $150M contract including CDMA2000 1X channel cards and software and Flexent® CDMA Modular Cell 4.0 base stations
- ✓ **Verizon Wireless**
  - – $525M contract for Nationwide CDMA2000 1xEV-DO roll out
- ✓ **Telecom Italia Mobile**, **T-Mobile, Orange, E-Plus**, **Telefonica Moviles, O2, "3"**
  - – Multi-million dollar contracts for UMTS (W-CDMA) Wireless PC Modem cards
- ✓ **Delta Telecom (SKYLINK), UzbekTelecom**
  - – CDMA450 equipment and services
- ✓ **Telefonica Moviles (Spain)**
  - – Network management software for UMTS (W-CDMA), GPRS and GSM networks
- ✓ **SprintPCS**
  - – New $1B new contract including Flexent® CDMA Modular Cell 4.0 base stations
- ✓ **KTF (Korea)**
  - – $80M contract to supply 3G CDMA2000 1xEV-DO network
- ✓ **AT&T Wireless**
  - – W-CDMA (UMTS) equipment trial in Miami
- ✓ **China Unicom**
  - – $400M contract win in Phase III CDMA2000 rollout
- ✓ **VIVO**
  - – Agreement to expand VIVO's 3G CDMA2000 1X network

Market Dynamics

Lucent Technologies
Bell Labs Innovations

Technology:
- CDMA2000® & UMTS (W-CDMA) Advances
- Softswitch Technology
- VoIP
- WiFi/802.xx
- Premises Technology alternatives

Competitive Forces
New Players
"Bundling"

Regulatory Changes:
- Local Number Portability (LNP)
- Do Not Call List
- VoIP Telephony

Convergence - Provision of wireline and wireless bundles
Service transparency and Enhanced Voice and Data applications



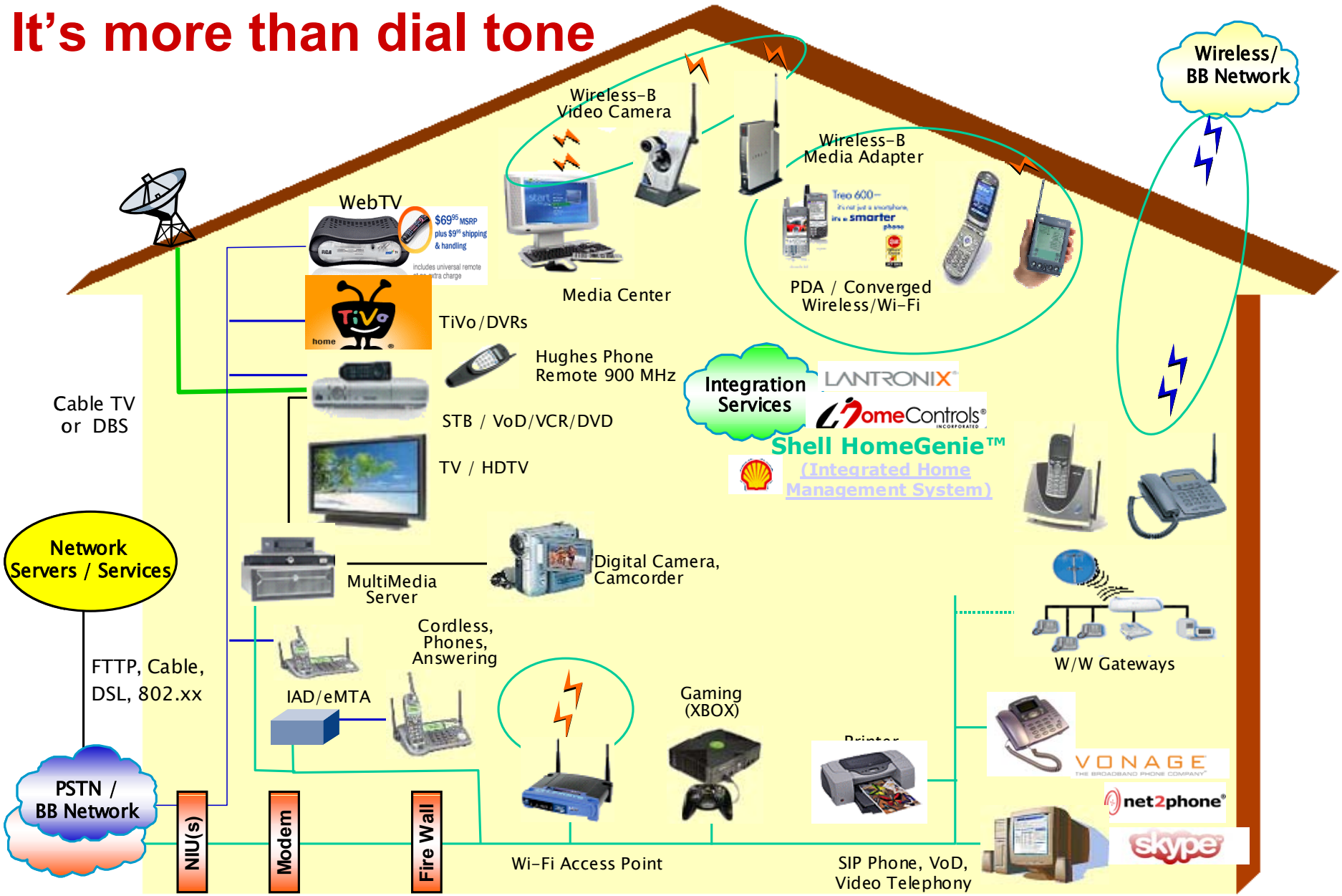
Convergence Creates New Opportunities



For End-User(s):
- New services bundles and devices
- Access a wider array of services
- Greater productivity and easy of use
- Consolidate to single bill
- Better customer care
- Greater ease of use
- Device/access alternatives

For Operators:
- Enhance differentiation by creating Sticky services and offers
- Increase market share and ARPU
- Reduce churn

Consumer's Multimedia Home: It's more than dial tone

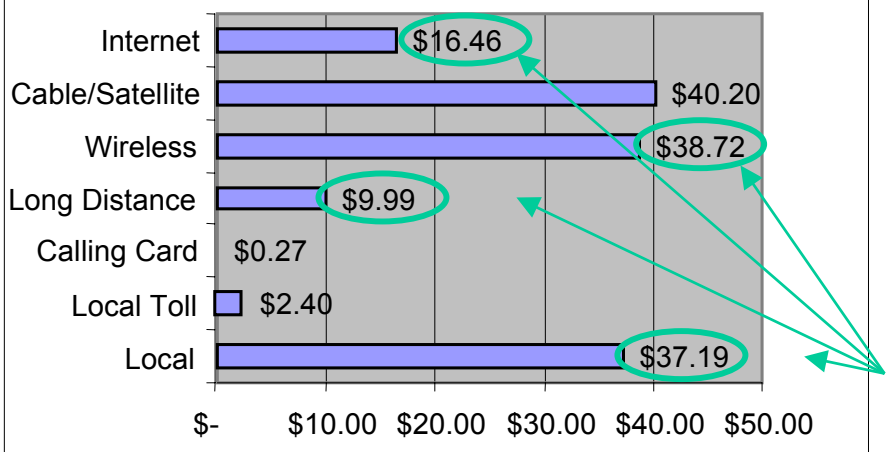


Live wireless. Work wireless. Be wireless.

Residential Telecom Wallet

Lucent Technologies
Bell Labs Innovations

Average Monthly Telecom Expenses (US)
"The residential telecom Wallet"



Total current spending: $145
(broadband not even reflected)

TNS Telecoms Industry Tracking Data

- Market Trends
  - Everyone is bundling to retain subscribers (reduce churn)
  - Pieces of the "wallet" are beginning to disappear (e.g. calling card, LD for wireless calls)
- Market opportunity
  - End-Users are driven by the opportunity to reduce monthly spend
  - Opportunity for operators to take share and grow ARPU
- Observations
  - Players with scale have an advantage
  - **Bundling alone will shrink the wallet**

Opportunities exist for converged networks to serve the needs of today's wireless and wireline subscribers

Start with the End-User….
Benefits of the Future Network

Lucent Technologies
Bell Labs Innovations



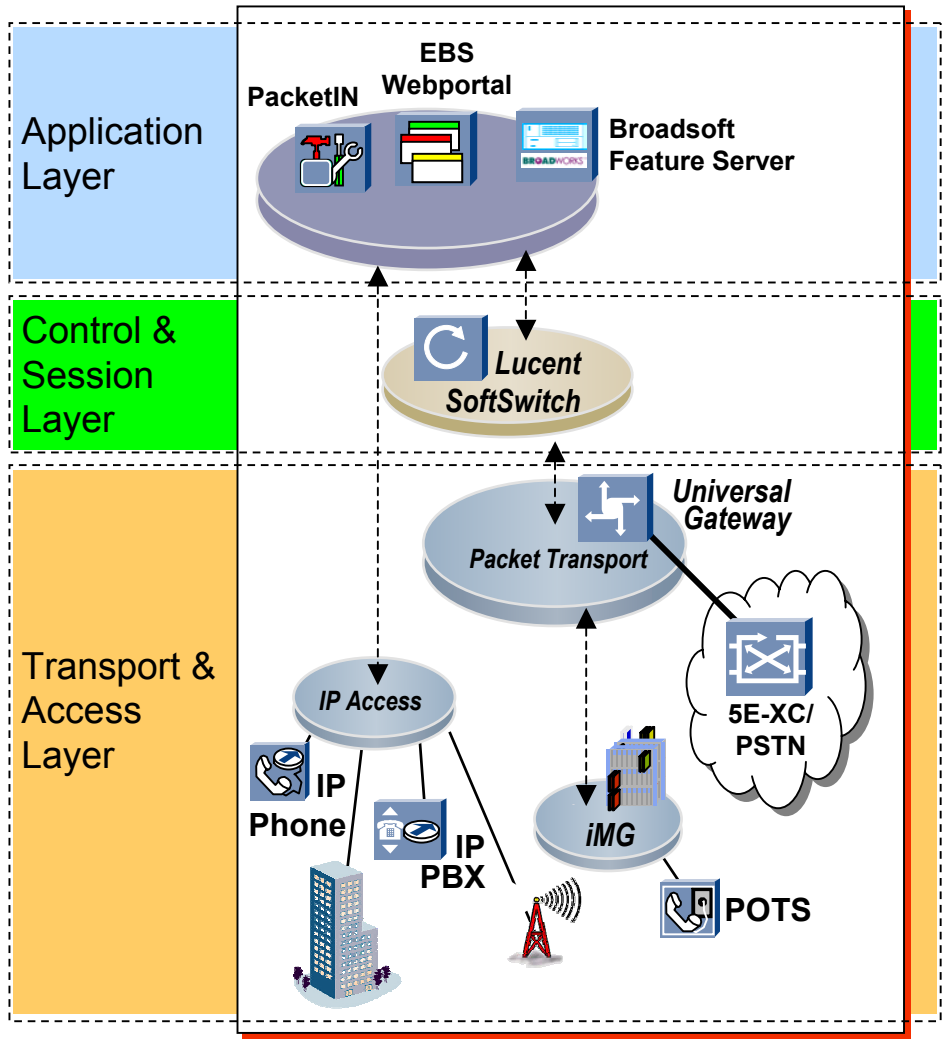
- Lifestyle Services & Personalization
  - “We Bring the Network to You !!”
  - Customization to Meet Consumer Needs
- Ease of use – Seamless, “Always-On”
- Inside & Outside Premises
- Enhanced service and offer bundling
  - Voice, data, video/entertainment, mobility
- Access independence
  - Any location, any time, variety of access & devices
- Device alternatives
  - Mobile phone, laptop, PDA, etc.
- One stop billing and customer care

Realizing the Benefits of 3G Voice and Data Convergence

Market-Focused IP Solutions

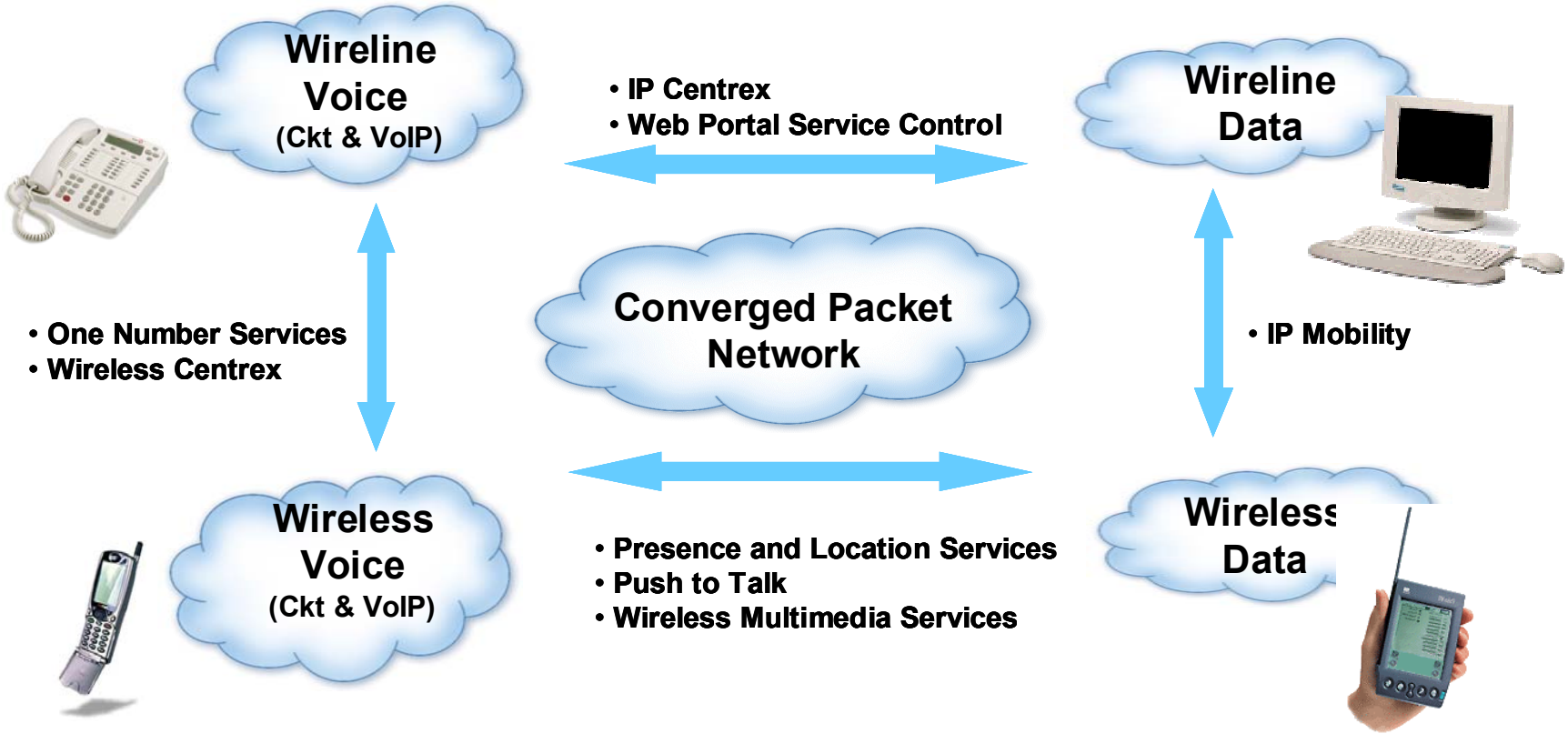
Lucent Technologies
Bell Labs Innovations

- **IP Telephony Is Changing the Market**
  - **Moving from hardware to software driven**
  - **Access Independence - IMS**
  - **Applications driving all segments**
    - ✓ **Personal Organizers & Unified Messaging**
    - ✓ **Presence & Push to Talk**
    - ✓ **Push to Media**
    - ✓ **Gaming & … …**
    - ✓ **VoIP**
- **Market Focused**
  - **Wireless – UMTS; CDMA-2000**
  - **Business – Hosted and Managed**
  - **Consumer – VoBB**
  - **Wireline**



The First Step….
Network Convergence

Lucent Technologies
Bell Labs Innovations



Convergence enables new Access Independent services
Bringing the Network's Intelligence to the End-User

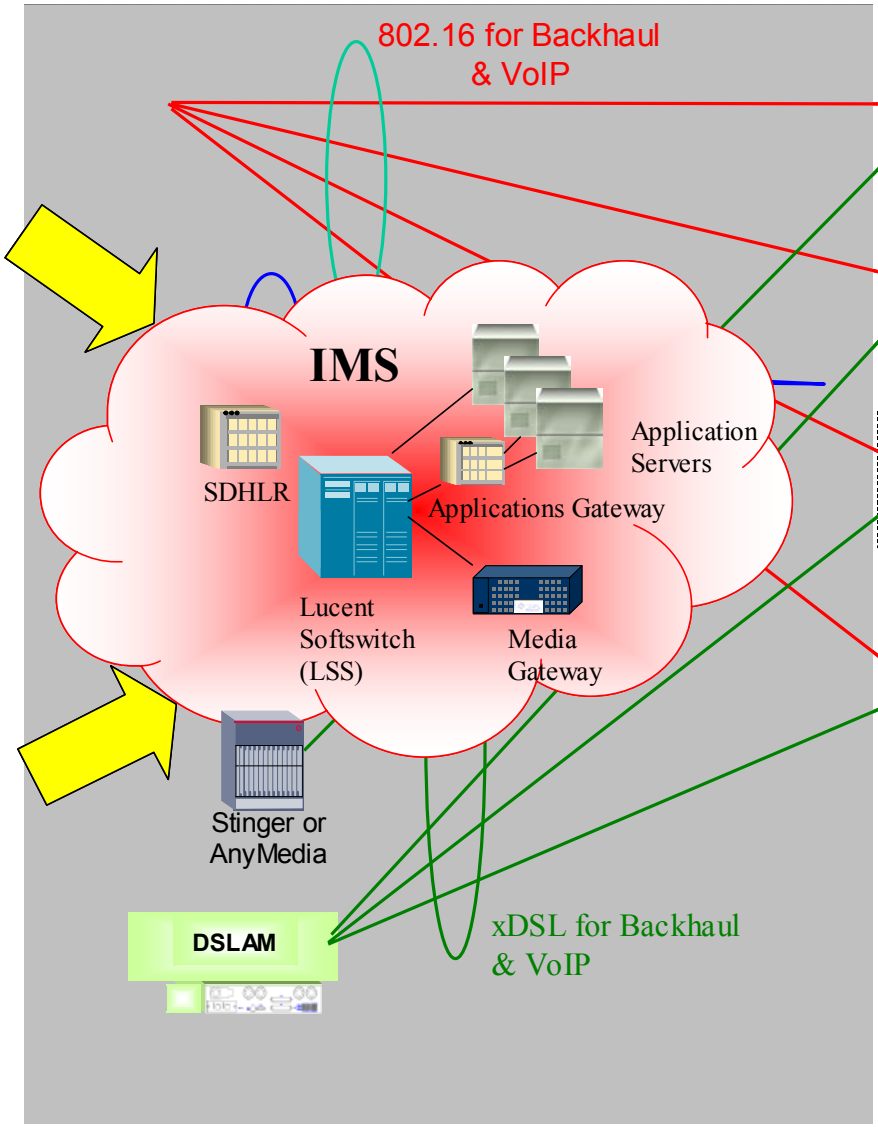
Live wireless. Work wireless. Be wireless.

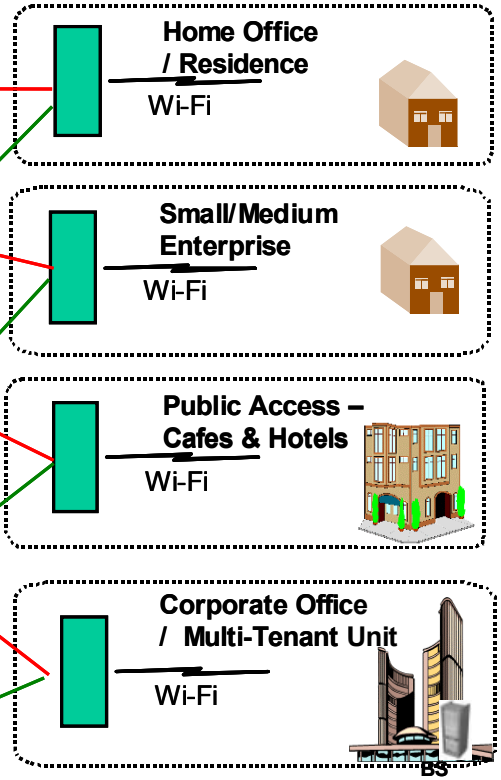
Lucent Technologies
Bell Labs Innovations

IP Multi-Media Subsystem (IMS) Packet Core

(Mobile) Core Network & Network Elements
MSC
SD-HLR, HLR, AAA
Mobile IP G/W (PDSN/GGSN – e.g. Cisco
Softswitch & Media Gateway
Media Replicator & PTT Server
Network Management

(Fixed) Core Network & Network Elements
Softswitch & Media Gateway
Media Replicator & PTT server
Network management
AAA
Mobile IP Gateway
Router (e.g. Juniper)



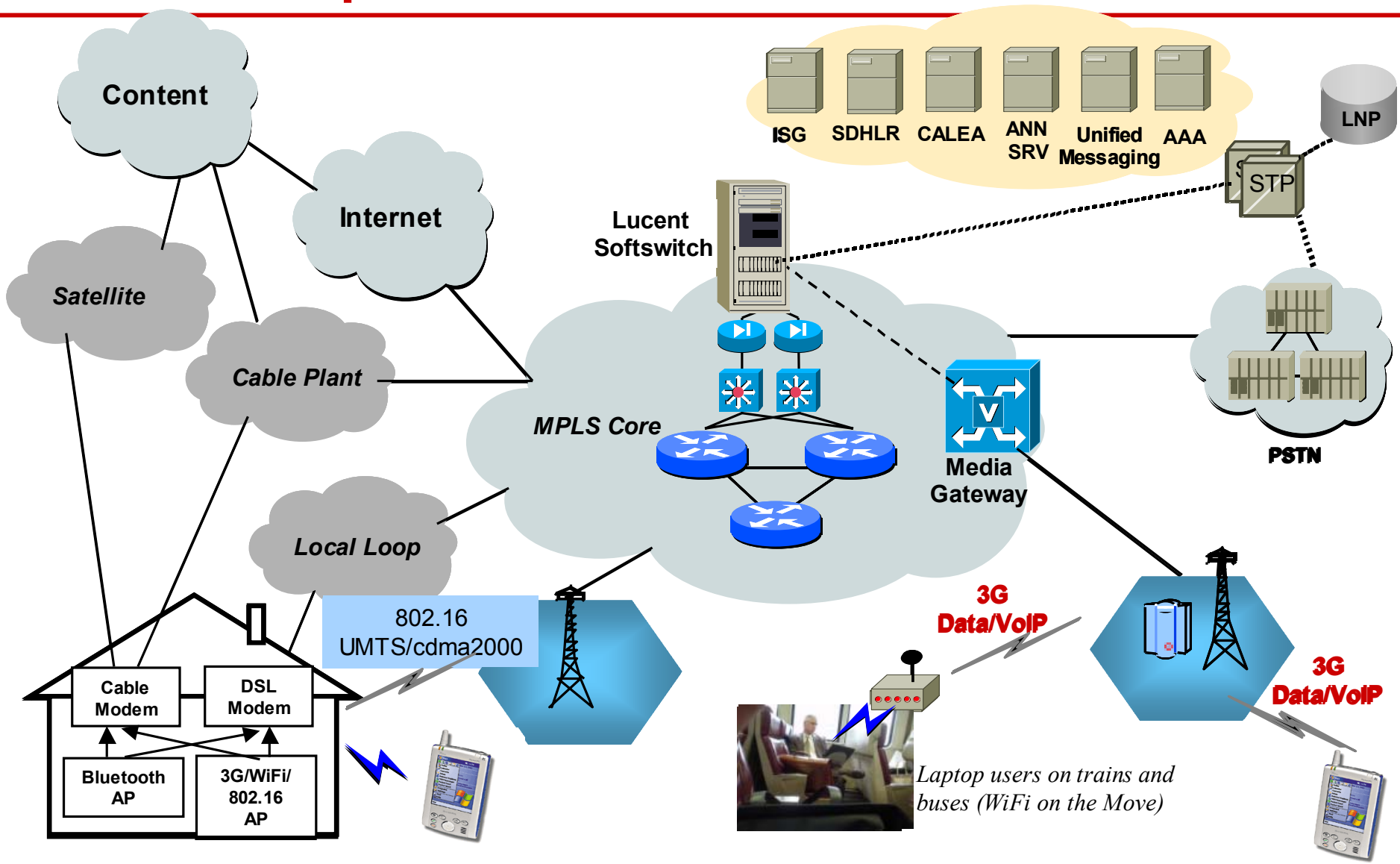


- **Wi-Fi Access with Wireless Broadband Backhaul**
- **WiFi access with 3G backhaul – (4 to 8 Mbps)**
- **Leverage Wi-Fi technology**
- **Handset/Device:**
  - **Dual-Mode – Wi-Fi**
  - **Single Mode Wi-Fi**

Live wireless. Work wireless. Be wireless.

Reaching the End-User
Make the Experience Seamless !!

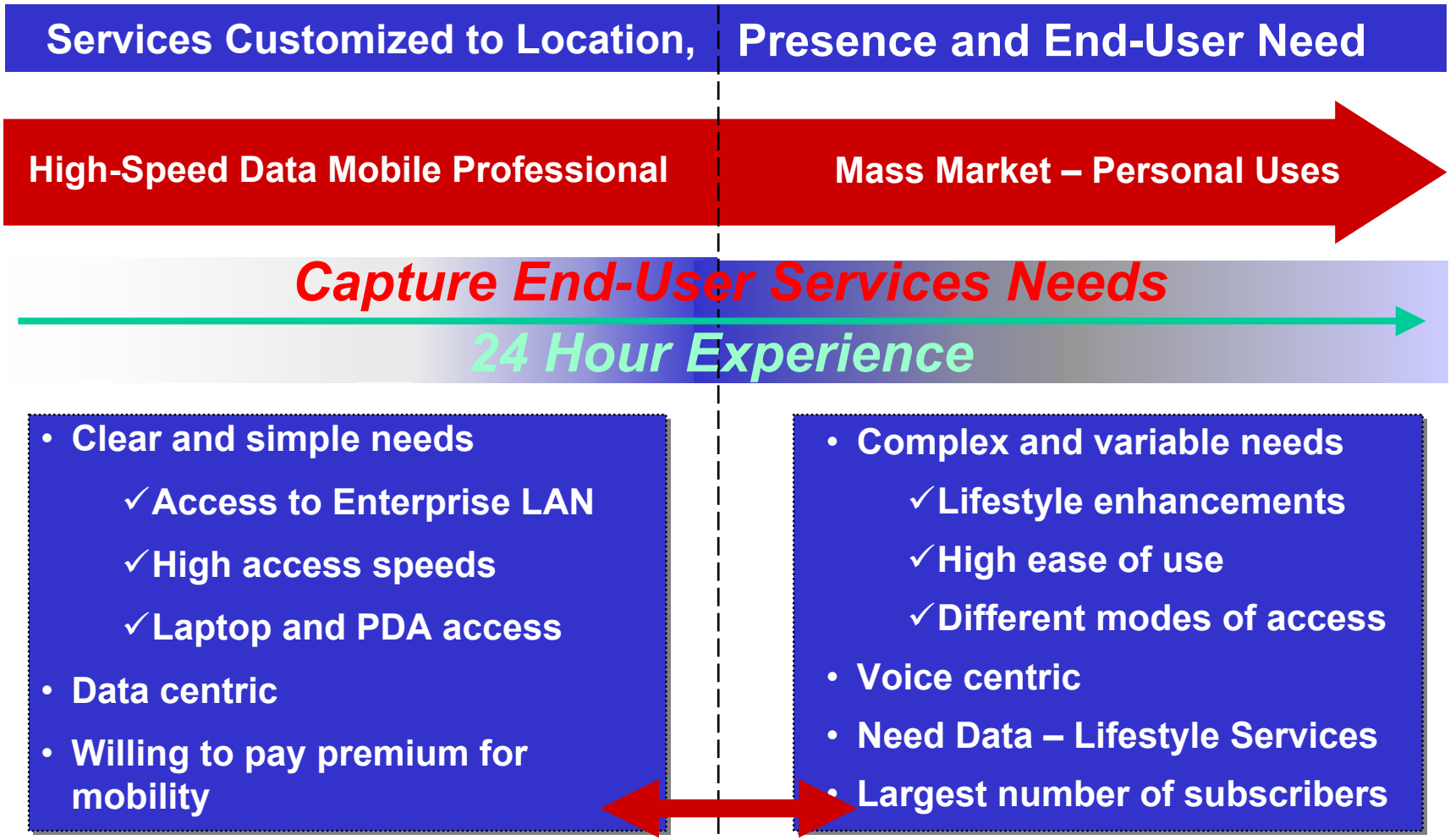
Lucent Technologies
Bell Labs Innovations



Live wireless. Work wireless. Be wireless.

End-User's 24 Hour Day…. Seamless Experience

Lucent Technologies
Bell Labs Innovations



Seamless Easy-to-Use Movement
It's All About the Communications Experience !!

Live wireless. Work wireless. Be wireless.

Lucent Delivers the Vision

Lucent Technologies
Bell Labs Innovations



3G

4G

CDMA2000	UMTS W-CDMA
EV-DO	HSDPA
Revision A EV-DO Revision D EV-DV	HSDPA-EUDCH
SoftSwitch/MG	SoftSwitch/MG
VoIP/QoS/MPLS	VoIP/QoS/MPLS
802.11/16 Interop.	802.11/16 Interop.
BLAST/MIMO	BLAST/MIMO
Base Station Routers	Base Station Routers



Live wireless. Work wireless. Be wireless.

Key Takeaways

Lucent Technologies
Bell Labs Innovations



- "Bring the Network to the User" - Mass Market 3G HSD
  - Enterprise, Consumer – Voice, Data, Video/Image
  - Personalization & Customization – "Always-On"
  - Seamless Mobility & Presence – Inside & Outside Premises
- Convergence & IMS
  - 3G HSD Lays the Foundation
  - Mass Market Converged Services – Data & VoIP
  - Access Independence
- IMS Architecture key to new services
  - Location Based Services, Push to Speak, Push to Video,…..
  - Circuit to Packet Platform migration to All-IP VoIP Networks
- Converged Lifestyle Services
  - Manage Professional & Personal Applications

Lucent Technologies
Bell Labs Innovations



Q&A
Cindy Christy
President, Mobility Solutions Group

Live wireless. Work wireless. Be wireless.